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#### IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of

Hiroshi AZAKAMI et al.

Mail Stop: PCT

Serial No. NEW

Attorney Docket No. 2005 1601A

Filed October 21, 2005

HIGH FREQUENCY SIGNAL LEVEL DETERMINING DEVICE AND HIGH FREQUENCY SIGNAL RECEIVER APPARATUS USING THE SAME [Corresponding to PCT/JP2004/005707 THE COMMISSIONER IS AUTHORIZED TO CHARGE ANY DEFICIENCY IN THE FEES FOR THIS PAPER TO DEPOSIT

**ACCOUNT NO. 23-0975** 

[Corresponding to PCT/JP2004/005707 Filed April 21, 2004]

#### **SUBMISSION OF REPLACEMENT DRAWINGS**

Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

Sir:

Submitted herewith are 6 sheets of formal (A4) drawings (Figs. 1, 11, 16, 20, 23, and 24). As described in the Preliminary Amendment filed concurrently herewith, in the corrected drawings various editorial amendments have been made. Due to the nature and number of changes, a marked-up of the amended figures are enclosed in order to provide an explanation of the amendments.

Respectfully submitted,

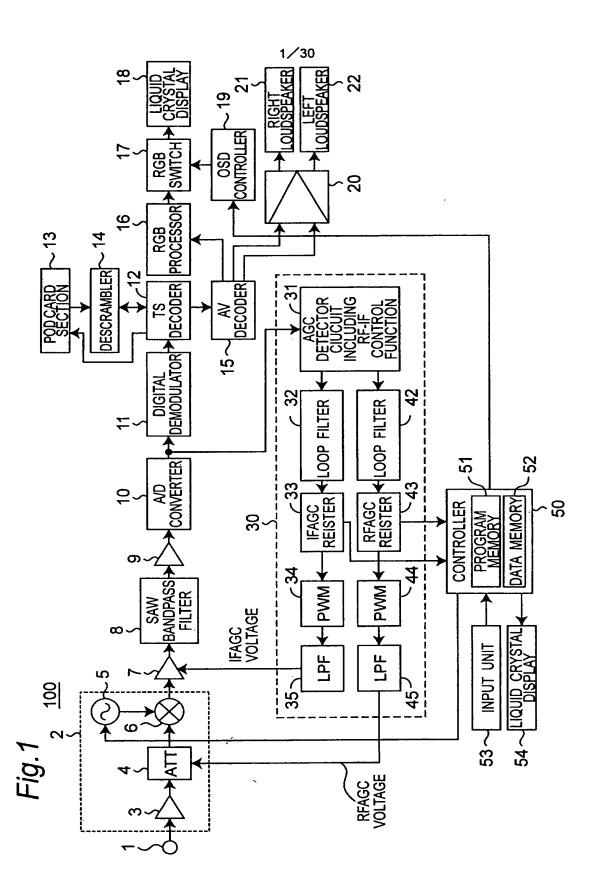
Hiroshi AZAKAMI et al.

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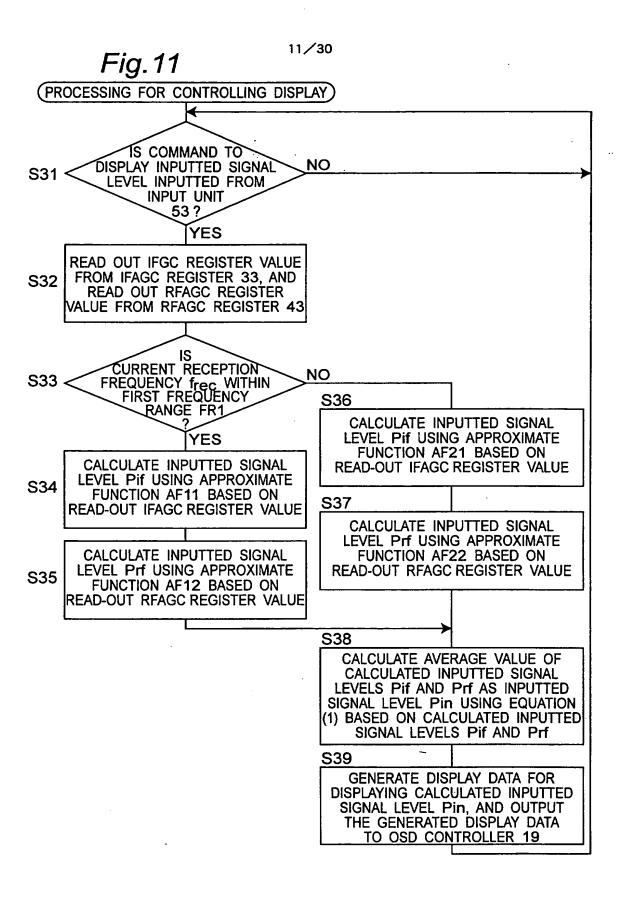
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## Fig. 16

#### PROCESSING FOR GENERATING DISPLAY CONTROL PROGRAM

**S61** 

WITH CONTROLLING HIGH-FREQUENCY SIGNAL GENERATOR 65 TO CHANGE INPUTTED SIGNAL LEVEL OF HIGH-FREQUENCY SIGNAL INPUTTED TO INPUT TERMINAL 1 FROM -20 dBmV TO +20 dBmV EVERY ONE dBmV, MEASURE IFAGC REGISTER VALUES AND RFAGC REGISTER VALUES CORRESPONDING TO INPUTTED SIGNAL LEVELS. AND STORE THE READ-OUT SAME VALUES IN DATA MEMORY 62

S621

SEARCH THE MAXIMUM VALUE OF RFAGC REGISTER VALUES BASED ON MEASURED RFAGC REGISTER VALUES. STORE THE SEARCHED MAXIMUM VALUE IN DATA MEMORY 62, SEARCH A RANGE OF INPUTTED SIGNAL LEVELS WHEN RFAGC REGISTER VALUE HAS THE MAXIMUM VALUE, SET THE SEARCHED RANGE AS FIRST LEVEL RANGE LR1. AND SET THE RANGE OF INPUTTED SIGNAL LEVELS WHEN RFAGC REGISTER VALUE HAS NOT THE MAXIMUM VALUE AS SECOND LEVEL RANGE LR2

S63

CALCULATE APPROXIMATE FUNCTION AF51 OF RELATIONSHIP OF IFAGC REGISTER VALUES TO RESPECTIVE INPUTTED SIGNAL LEVELS WITHIN FIRST LEVEL RANGE LR1 BASED ON DATA REPRESENTING THE RELATIONSHIP

CALCULATE APPROXIMATE FUNCTION AF52 OF RELATIONSHIP OF RFAGC S64 REGISTER VALUES TO RESPECTIVE INPUTTED SIGNAL LEVELS WITHIN SECOND LEVEL RANGE LR2 BASED ON DATA REPRESENTING THE RELATIONSHIP

**S65** 

GENERATE DISPLAY CONTROL PROGRAM (Fig.17) INCLUDING THE CALCULATED APPROXIMATE FUNCTIONS AF51 AND AF52, AND WRITE THE GENERATED PROGRAM IN PROGRAM MEMORY 51 OF CONTROLLER 50

**END** 

### Fig.20

#### PROCESSING FOR GENERATING DISPLAY CONTROL PROGRAM

S81

WITH CONTROLLING HIGH-FREQUENCY SIGNAL GENERATOR 65 TO CHANGE INPUTTED SIGNAL LEVEL OF HIGH-FREQUENCY SIGNAL INPUTTED TO INPUT TERMINAL 1 AND HAVING GENERAL CENTRAL FREQUENCY  $f_{1c}$  OF 255 MHz WITHIN FIRST FREQUENCY RANGE FR1 FROM —20 dBmV TO +20 dBmV EVERY ONE dBmV, READ OUT IFAGC REGISTER VALUES AND RFAGC REGISTER VALUES CORRESPONDING TO RESPECTIVE INPUTTED SIGNAL LEVELS FROM IFAGC REGISTER 33 AND RFAGC REGISTER 43, RESPECTIVELY, AND STORE THE READ-OUT SAME VALUES IN DATA MEMORY 62

S82

SEARCH THE MAXIMUM VALUE OF RFAGC REGISTER VALUES BASED ON THE MEASURED RFAGC REGISTER VALUES FOR FIRST FREQUENCY RANGE FR1, STORE THE SEARCHED MAXIMUM VALUE IN DATA MEMORY 62, SEARCH A RANGE OF INPUTTED SIGNAL LEVELS WHEN RFAGC REGISTER VALUE HAS THE MAXIMUM VALUE, SET THE SEARCHED RANGE AS LEVEL RANGE LR11 OF FIRST FREQUENCY RANGE FR1, AND SET THE RANGE OF INPUTTED SIGNAL LEVELS WHEN RFAGC REGISTER VALUE HAS NOT THE MAXIMUM VALUE AS LEVEL RANGE LR12 OF FIRST FREQUENCY RANGE FR1

**S83** 

CALCULATE APPROXIMATE FUNCTION AF61 OF RELATIONSHIP OF IFAGC REGISTER VALUES TO RESPECTIVE INPUTTED SIGNAL LEVELS WITHIN LEVEL RANGE LR11 BASED ON DATA REPRESENTING THE RELATIONSHIP

**S84** 

CALCULATE APPROXIMATE FUNCTION AF62 OF RELATIONSHIP OF RFAGC REGISTER VALUES TO RESPECTIVE INPUTTED SIGNAL LEVELS WITHIN LEVEL RANGE LR12 BASED ON DATA REPRESENTING THE RELATIONSHIP

S85

WITH CONTROLLING HIGH FREQUENCY SIGNAL GENERATOR 65 TO CHANGE INPUTTED SIGNAL LEVEL OF HIGH FREQUENCY SIGNAL INPUTTED TO INPUT TERMINAL 1 AND HAVING GENERAL CENTRAL FREQUENCY f<sub>2c</sub> OF 255 MHz WITHIN SECOND FREQUENCY RANGE FR2 FROM —20 dBmV TO +20 dBmV EVERY ONE dBmV, READ OUT IFAGC REGISTER VALUES AND RFGAGC REGISTER VALUES CORRESPONDING TO RESPECTIVE INPUTTED SIGNAL LEVELS FROM IFAGC REGISTER 33 AND RFAGC REGISTER 43, RESPECTIVELY, AND STORE THE READ-OUT SAME VALUES IN DATA MEMORY 62

Fig.23

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### PROCESSING FOR GENERATING DISPLAY CONTROL PROGRAM

WITH CONTROLLING HIGH-FREQUENCY SIGNAL GENERATOR 65 TO CHANGE INPUTTED SIGNAL LEVEL OF HIGH-FREQUENCY SIGNAL INPUTTED TO INPUT TERMINAL 1 AND HAVING MINIMUM FREQUENCY f<sub>1min</sub> OF 57 MHz WITHIN FIRST FREQUENCY RANGE FR1 FROM —20 dBmV to +20 dBmV every one dBmV, read out ifagc register values and reagc register values corresponding to respective inputted signal levels from IFAGC register 33 and reagc register 43, respectively, and store the read-out same values in data memory 62

S102

WITH CONTROLLING HIGH-FREQUENCY SIGNAL GENERATOR 65 TO CHANGE INPUTTED SIGNAL LEVEL OF HIGH-FREQUENCY SIGNAL INPUTTED TO INPUT TERMINAL 1 AND HAVING MAXIMUM FREQUENCY f<sub>1max</sub> within first frequency range fr1 and minimum frequency f<sub>2min</sub> of 459 MHz within second frequency range fr2 from -20 dBmV to +20 dBmV every one dBmV, read out ifagc register values and reagc register values corresponding to respective inputted signal levels from ifagc register 33 and reagc register 43, respectively, and store the read-out same values in data memory 62

S103

WITH CONTROLLING HIGH-FREQUENCY SIGNAL GENERATOR 65 TO CHANGE INPUTTED SIGNAL LEVEL OF HIGH-FREQUENCY SIGNAL INPUTTED TO INPUT TERMINAL 1 AND HAVING MAXIMUM FREQUENCY  $f_{2max}$  OF 861 MHz WITHIN SECOND FREQUENCY RANGE FR2 FROM -20 dBmV to +20 dBmV EVERY ONE dBmV, READ OUT IFAGC REGISTER VALUES AND RFAGC REGISTER VALUES CORRESPONDING TO RESPECTIVE INPUTTED SIGNAL LEVELS FROM IFAGC REGISTER 33 AND RFAGC REGISTER 43, RESPECTIVELY, AND STORE THE READ-OUT SAME VALUES IN DATA MEMORY 62

S104

SEARCH THE MAXIMUM VALUE OF RFAGC REGISTER VALUES BASED ON THE MEASURED RFAGC REGISTER VALUES AT MINIMUM FREQUENCY  $f_{1min}$  OF FIRST FREQUENCY RANGE FR1, STORE THE SEARCHED MAXIMUM VALUE IN DATA MEMORY 62 AS THE MAXIMUM VALUE OF RFAGC REGISTER VALUES WITHIN FIRST FREQUENCY RANGE FR1, SEARCH A RANGE OF INPUTTED SIGNAL LEVELS WHEN RFAGC REGISTER VALUE HAS THE MAXIMUM VALUE, SET THE SEARCHED RANGE AS LEVEL RANGE LR11 OF FIRST FREQUENCY RANGE FR1, AND SET THE RANGE OF INPUTTED SIGNAL LEVELS WHEN RFAGC REGISTER VALUE HAS NOT THE MAXIMUM VALUE AS LEVEL RANGE LR12 OF FIRST FREQUENCY RANGE FR1

S105

SEARCH THE MAXIMUM VALUE OF RFAGC REGISTER VALUES BASED ON THE MEASURED RFAGC REGISTER VALUES AT MINIMUM FREQUENCY f<sub>2min</sub> of SECOND FREQUENCY RANGE FR2, STORE THE SEARCHED MAXIMUM VALUE IN DATA MEMORY 62 AS THE MAXIMUM VALUE OF RFAGC REGISTER VALUES WITHIN SECOND FREQUENCY RANGE FR2, SEARCH A RANGE OF INPUTTED SIGNAL LEVELS WHEN RFAGC REGISTER VALUE HAS THE MAXIMUM VALUE, SET THE SEARCHED RANGE AS LEVEL RANGE LR21 OF SECOND FREQUENCY RANGE FR2, AND SET THE RANGE OF INPUTTED SIGNAL LEVELS WHEN RFAGC REGISTER VALUE HAS NOT THE MAXIMUM VALUE AS LEVEL RANGE LR22 OF SECOND FREQUENCY RANGE FR2

Fig.24

(C)

S106

CALCULATE APPROXIMATE FUNCTION AF81a OF RELATIONSHIP OF IFAGC REGISTER VALUES TO RESPECTIVE INPUTTED SIGNAL LEVELS WITHIN LEVEL RANGE LR11 AT MINIMUM FREQUENCY f<sub>1min</sub> WITHIN FIRST FREQUENCY RANGE FR1 BASED ON DATA REPRESENTING THE RELATIONSHIP

S107

CALCULATE APPROXIMATE FUNCTION AF81b OF RELATIONSHIP OF RFAGC REGISTER VALUES TO RESPECTIVE INPUTTED SIGNAL LEVELS WITHIN LEVEL RANGE LR12 AT MINIMUM FREQUENCY f<sub>1min</sub> WITHIN FIRST FREQUENCY RANGE FR1 BASED ON DATA REPRESENTING THE RELATIONSHIP

S108

CALCULATE APPROXIMATE FUNCTION AF82a=AF91a OF RELATIONSHIP OF IFAGC REGISTER VALUES TO RESPECTIVE INPUTTED SIGNAL LEVELS WITHIN LEVEL RANGE LR21 AT MAXIMUM FREQUENCY f<sub>1max</sub>-Within first frequency range fr1 and minimum frequency f<sub>2min</sub> within second frequency range fr2 based on data representing the relationship

S109

CALCULATE APPROXIMATE FUNCTION AF82b=AF91b OF RELATIONSHIP OF RFAGC REGISTER VALUES TO RESPECTIVE INPUTTED SIGNAL LEVELS WITHIN LEVEL RANGE LR22 AT MAXIMUM FREQUENCY f<sub>1max</sub> WITHIN FIRST FREQUENCY RANGE FR1 AND MINIMUM FREQUENCY f<sub>2min</sub> WITHIN SECOND FREQUENCY RANGE FR2 BASED ON DATA REPRESENTING THE RELATIONSHIP

S110

CALCULATE APPROXIMATE FUNCTION AF92a OF RELATIONSHIP OF IFAGC REGISTER VALUES TO RESPECTIVE INPUTTED SIGNAL LEVELS WITHIN LEVEL RANGE LR21 AT MAXIMUM FREQUENCY f<sub>2max</sub> WITHIN SECOND FREQUENCY RANGE FR2 BASED ON DATA REPRESENTING THE RELATIONSHIP

S111

CALCULATE APPROXIMATE FUNCTION AF92b OF RELATIONSHIP OF RFAGC REGISTER VALUES TO RESPECTIVE INPUTTED SIGNAL LEVELS WITHIN LEVEL RANGE LR22 AT MAXIMUM FREQUENCY f<sub>2max</sub> WITHIN SECOND FREQUENCY RANGE FR2 BASED ON DATA REPRESENTING THE RELATIONSHIP

S112

GENERATE DISPLAY CONTROL PROGRAM (Fig.25) INCLUDING THE CALCULATED APPROXIMATE FUNCTIONS AF81a, AF81b, AF82a=AF91a, AF82b=AF91b, AF92a, AND AF92b, AND WRITE THE GENERATED PROGRAM IN PROGRAM MEMORY 51 OF CONTROLLER 50

**END**